

Notice of Allowability

Application No.

10/804,222

Examiner

Amy He

Applicant(s)

MCQUEENEY, KENNETH A.

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2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ The drawings filed on 19 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>3/19/04 & 9/27/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

REASONS FOR ALLOWANCE

1. Claims 1-18 are allowed.
2. The following is an examiner's statement of reasons for allowance: .

Claims 1-10 are allowable because none of the prior art discloses a testing apparatus for testing a waste-power ignition coil, the testing apparatus comprising: a distributor comprising a rotor and a rotor cap comprising a plurality of contacts, a first pair of opposing contacts being electrically connected to a first output of a secondary side of a waste-power ignition coil under test and a second pair of opposing contacts being electrically connected to a second output of the secondary side of the waste-power ignition coil under test; the rotor acts synchronously with an actuator to ground a respective one of first output and the second output of the secondary side of the waste-power ignition coil under test to simulate a waste-stroke phase for an associated spark plug and to provide a voltage from another of the first output and the second output of the secondary side of the waste-power ignition coil under test to simulate a power-stroke phase for an associated spark plug, and in the combination as claimed.

Claims 11-15 are allowable because none of the prior art discloses a testing apparatus for testing a waste-power ignition coil, the testing apparatus comprising: a second switching device bearing a first pair of contacts being electrically connected to one of a positive going and negative going output of a secondary winding of the waste-power ignition coil under test and a second pair of contacts being electrically connected to another of a positive going and negative going output of the secondary winding of the waste-power ignition coil under test, wherein the second switching device acts

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substantially synchronously with an igniter simulator actuator to ground a respective one of the positive going and negative going output of the secondary winding of the waste-power ignition coil under test to simulate a waste-stroke phase, and in the combination as claimed.

Claims 16-18 are allowable because none of the prior art discloses a method for testing a waste-power ignition coil, comprising the steps of: electrically connecting a second switching device to each of the positive going output of the waste-power ignition coil and the negative going output of the waste-power ignition coil; operating the second switching device to, substantially simultaneously with the operation of a first switching device, intermittently and alternately ground the positive going output and the negative going output of the waste-power ignition coil to simulate a waste-stroke phase for the grounded output and associated spark plug and to simulate a power-stroke phase for the non-grounded output, and in the combination as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chang (U. S. Patent No. 5, 479, 101) discloses an ignition coil tester includes an oscillator for simulating an output signal from the ignition module associated with the ignition coil being tested. Short and open circuit detectors are provided.

Sterling (U. S. Patent No. 4, 385,278) discloses a testing apparatus for testing an electronic ignition system, the apparatus comprising a first switching device connected to the primary coil of the ignition coil, and a distributor connected to the secondary outputs of the ignition coil.

Butler Jr. et al. (U. S. Patent No. 6, 842,007) discloses a ignition coil durability testing apparatus comprising a zener box allowing a sustaining voltage to be chosen such as to simulate a sustained spark gap voltage.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (571) 272-2230. The examiner can normally be reached on 8:30am-5pm.

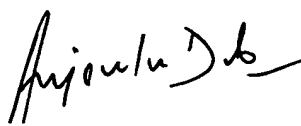
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AH

July 7, 2005.


ANJAN DEB
PRIMARY EXAMINER